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STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
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KIRK T. STEUDLE
DIRECTOR

May 24, 2018

The Honorable Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington, D.C. 20554

Dear Secretary Dortch:

Subject: ET Docket No. 13-49, Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band

The Michigan Department of Transportation's (MDOT's) most important goal is to reduce the number of traffic fatalities on our highways to zero. This goal has only been strengthened by the increase in highway deaths in recent years. MDOT believes that technologies such as connected vehicles, including vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I), and automated driving systems, have the ability to play an important role in reducing this upward trend and moving us toward zero deaths. For connected vehicle systems, Dedicated Short-Range Communications (DSRC), operating in the 5.9 Gigahertz (GHz) band is the only technology proven to work and currently available for deployment. MDOT is actively deploying DSRC Roadside Infrastructure and Safety Applications throughout Michigan, including deploying the technology to increase safety at signalized intersections, and during traffic congestion and inclement weather. We urge the Federal Communications Commission (FCC) to protect that spectrum for this critical, life-saving use and to only allow sharing of the spectrum after thorough and conclusive testing proves that such use will not interfere with this function.

MDOT was encouraged and supportive of the announcement made on April 16, 2018 that Toyota would be installing DSRC devices on their vehicles beginning in 2021. Based on their positive experience in Japan, Toyota believes that DSRC applications can prevent crashes and save lives. MDOT would also like to acknowledge the previous announcements and support of DSRC technology to save lives made by General Motors and Volkswagen. We share the view of this technology's promise and have been preparing for the support of automotive deployments for nearly a decade. MDOT believes connected vehicle technologies based on DSRC have the potential to provide benefits, including reducing crashes and, most importantly, saving lives. DSRC technology is ready to deploy now and MDOT is actively deploying infrastructure and developing V2I applications to support MDOT's most important goal of saving lives. MDOT is actively working toward having these systems broadly deployed and operational in preparation for when Toyota and other vehicles need our system for safety applications.

MDOT reviewed a letter from FCC Commissioners O'Rielly and Rosenworcel to Toyota North America CEO, James Lentz, reminding him that the FCC and other federal agencies are evaluating the possibility of allowing unlicensed devices into the 5.9 GHz spectrum. This letter

suggested that DSRC is not yet "out of the conceptual testing phases and out on the road." We join states, local agencies, and cities around the country who are actively deploying infrastructure and developing V2I applications that are designed to utilize DSRC infrastructure to enhance road safety, reducing crashes and fatalities. These deployments include the implementation of several safety critical applications including Red Light Violation Warnings, Reduced Speed Zone Warnings, Curve Speed Warnings, and Spot Weather Impact Warnings. These deployments include expansions of the Safety Pilot Model Deployment in Ann Arbor, large pilot deployments in New York City, Tampa, and Wyoming, the Smart City Challenge in Columbus, and efforts in 26 states and cities in response to the American Association of State Highway Transportation Officials "SPaT Deployment Challenge."

MDOT has also joined 20 other state and local transportation agencies in the Coalition for Safety Sooner (CFSS) which supports the message that DSRC is ready to be deployed. DSRC is the only technology available with the low latency characteristics needed for safety-critical applications and has the benefit of over a decade of testing and application development. We recognize other technologies such as Cellular Vehicle-to-Everything (C-V2X) systems are emerging. However, as stated in the January 23, 2018 letter from CFSS, it is essential that eventual cellular systems "meet all of the communication standards established today for V2X, so that 5G systems are backwards compatible and complimentary to DSRC." The coalition also stated that it will be necessary for cellular V2X systems to "be made available on all vehicles, without subscription fees, as DSRC will be." We are hearing from the semiconductor industry that, in fact, C-V2X will not be "complimentary" to DSRC, in that it will require the same spectrum, and that V2V communication might be available without a subscription, but that V2X, which supports safety-critical applications with security subscriptions and other information, may not be. These are disturbing trends. We believe that protecting the lives of our citizens is a higher priority than the "efficient" use of the band for increasingly demanding entertainment and economic needs.

Researchers at the University of Michigan recently completed a study which quantified the costs of delaying deployment of safety-critical applications. Specifically, they evaluated the cumulative number of lives which will be lost if we wait even three or five years for a new technology (C-V2X) to be developed and proven. The study states that, "Up to 8.1 million car crashes and 44,000 deaths could be prevented if the federal government mandated connected vehicle technology now, rather than waiting even three years to develop and evaluate competing technologies." The conclusion is that tens of thousands of lives can be saved by deploying DSRC now, instead of waiting. While cellular V2X systems may be ready for use on our cell phones in just a few years, at least in large urban areas, the intense, iterative testing and real-world development that will be necessary for this technology to be reliably introduced into our automobiles for safety-critical use, will take much longer. As an agency responsible to save lives, we believe it is inappropriate to delay deployment of proven technologies while we wait for something better to come along. There will always be something better on the horizon, but

we must act now. This is especially true when the cost is tens of thousands of human lives and the reason for the delay, as stated in the letter from Commissioners O'Rielly and Rosenworcel, is to "increase spectrum for Wi-Fi and grow the wireless economy."

Furthermore, the letter from Commissioners O'Rielly and Rosenworcel to Toyota indicated that Phase I testing of the impacts of unlicensed use within the 5.9GHz band is complete, and that the FCC intends to move forward into Phase II and Phase III testing "in the coming months." To our knowledge, results from Phase I testing have not yet been made public. It is critical that the community have an opportunity to evaluate the results of that testing. Further, moving to Phase II and Phase III "in the coming months" portends an unreasonably quick schedule and suggests that the result is a foregone conclusion. We encourage the FCC and other agencies to move ahead judiciously, with thorough testing and public input, before drawing a conclusion.

MDOT strongly supports the positive action announced recently by Toyota, and previously by General Motors and Volkswagen, to deploy connected vehicle technology that has been proven to save lives. It is imperative that if the FCC allows shared use of the 5.9 GHz spectrum, clear and definitive demonstrations prove that such sharing will not interfere negatively with these existing safety-critical applications and deployments. We urge the FCC to move cautiously and preserve the current usage of the DSRC band solely for transportation safety. DSRC has been demonstrated to dramatically improve safety on our roads and highways, and every year that we wait to put it in place, we are losing thousands of lives.

Sincerely,

Kirk T. Steudle
Director

cc: The Honorable Secretary Chao
Michigan Congressional Delegation